

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/057722 A1

(51) International Patent Classification⁷: **H01Q 1/24**,
9/04, 5/00, 19/00

(21) International Application Number:
PCT/GB2004/005158

(22) International Filing Date:
10 December 2004 (10.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0328811.5 12 December 2003 (12.12.2003) GB

(71) Applicant (for all designated States except US): **ANTEN-
OVA LIMITED** [GB/GB]; Far Field House, Albert Road,
Stow-cum-Quy, Cambridge CB5 9AR (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **IELLICI, Devis**
[IT/GB]; Far Field House, Albert Road, Stow-cum-Quy,
Cambridge CB5 9AR (GB). **O'KEEFE, Steven, Gregory**
[AU/AU]; 74-78 Shiels Road, Chambers Flat, Queensland
4133 (AU). **KINGSLEY, James, William** [GB/GB]; Far

Field House, Albert Road,, Stow-cum-Quy, Cambridge
CB5 9AR (GB). **KINGSLEY, Simon, Philip** [GB/GB];
Far Field House, Albert Road,, Stow-cum-Quy, Cambridge
CB5 9AR (GB).

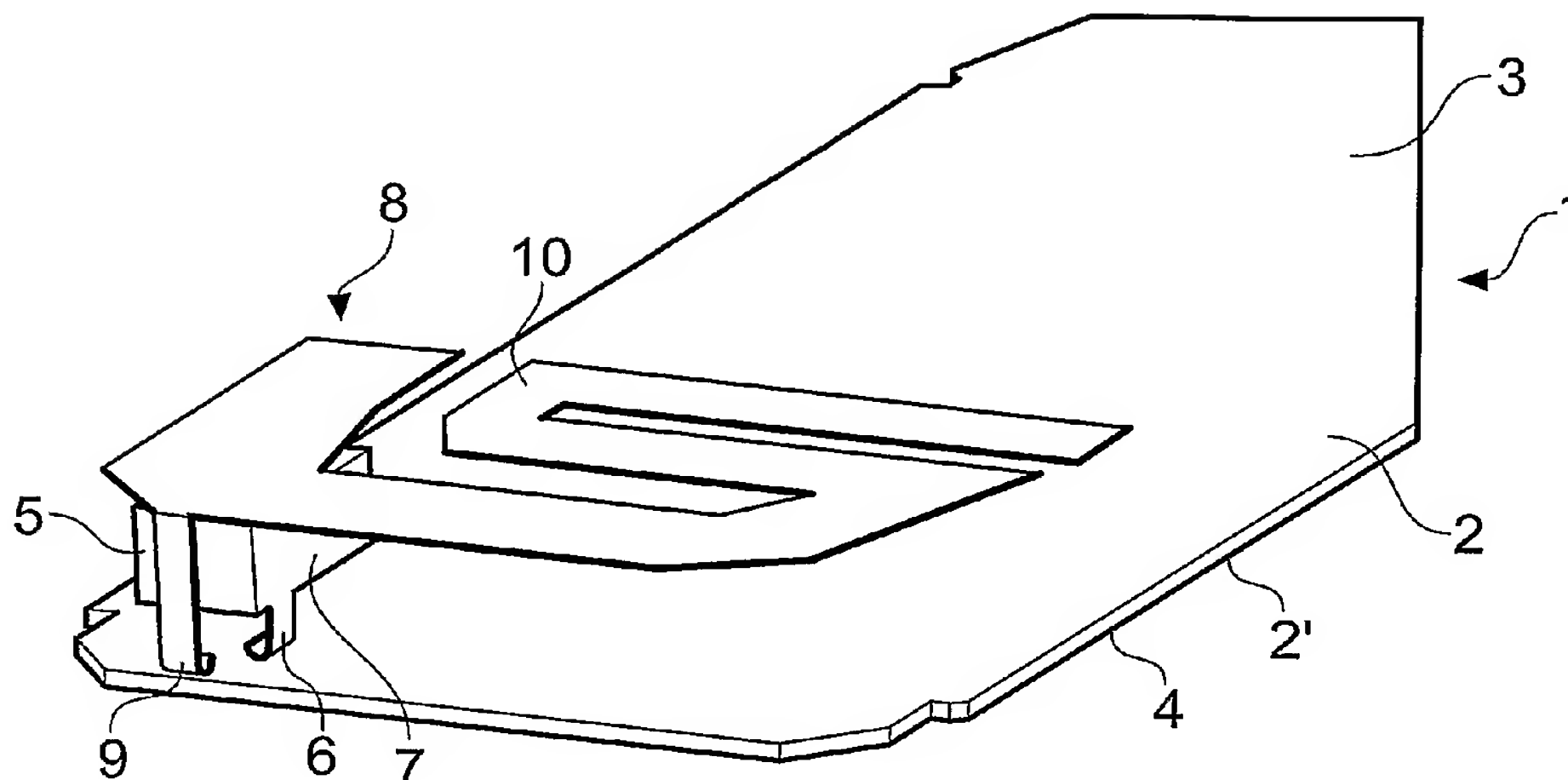
(74) Agent: **HARRISON GODDARD FOOTE**; Belgrave
Hall, Belgrave Street, Leeds LS2 8DD (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

[Continued on next page]

(54) Title: ANTENNA FOR MOBILE TELEPHONE HANDSETS, PDAS AND THE LIKE



(57) Abstract: The present invention relates to an antenna structure comprising a dielectric pellet and a dielectric substrate with upper and lower surfaces and at least one groundplane, wherein the dielectric pellet is elevated above the upper surface of the dielectric substrate such that the dielectric pellet does not directly contact the dielectric substrate or the groundplane, and wherein the dielectric pellet is provided with a conductive direct feed structure. A radiating antenna component is additionally provided and arranged so as to be excited by the dielectric pellet. Elevating the dielectric antenna component so that it does not directly contact the groundplane or the dielectric substrate significantly improves bandwidth of the antenna as a whole.

WO 2005/057722 A1



FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.